

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended). A method of closed-loop capacity scheduling between a base station and a mobile station, wherein the method comprises:

inputting respective flows to capacity controllers (FCC) in the mobile station;
selecting a traffic class from a plurality of QoS traffic classes;
allocating priority levels to the respective flows in consideration of the selected traffic class in order to transmit different QoS traffic classes; [[and]]

computing, in the FCCs, uplink capacity requests for the respective flows based on the selected traffic class;

changing, in a capacity request controller (CRC), the uplink capacity requests for each of the respective flows based on the priority level, the selected traffic class, and the uplink transmission power; and

transmitting the changed uplink capacity requests for each of the respective flows from the mobile station to the base station.

2.-3. (canceled).

4. (currently amended): The closed-loop capacity scheduling method as claimed in

claim[[3]]_1, further comprising:

receiving, in the base station, the changed capacity request;
computing, in the capacity scheduler (CS) of the base station, an allowable capacity for each of the flows with the use of the changed capacity request; and
transmitting capacity allocation indicating the allowable capacity for each of the flows from the base station to the mobile station.

5. (currently amended): The closed-loop capacity scheduling method as claimed in claim[[3]]_1, further comprising:
receiving, in the base station, the changed capacity request;
computing, in a capacity scheduler (CS) of the base station, an allowable capacity for each of the flows with the use of the changed capacity request;
computing a total value of the allowable capacities for the flows (the total allowable capacity) for each of the mobile stations; and
transmitting capacity allocation indicating the total allowable capacity for each of the mobile station from the base station to the mobile station.

6. (previously presented): The closed-loop capacity scheduling method as claimed in claim 4, further comprising:

receiving, in a capacity allocation controller (CAC) of the mobile station, the capacity allocation;
changing the capacity allocation received by the CAC with the use of the selected traffic class and the uplink transmission power to generate a changed allocated capacity; and

updating, in each of the FCCs, the allowable capacity with the use of the changed allocated capacity.

7. (previously presented): The closed-loop capacity scheduling method as claimed in claim 5, further comprising:

receiving, in a transport format combination controller (TFCC) of the mobile station, the capacity allocations,

selecting, in the TFCC, a combination of transport formats according to the capacity allocations; and

computing, in each of the FCC, a capacity request for each flow according to the selected combination of transport formats.

8.-13. (canceled).

14. (currently amended): A system for providing closed-loop capacity scheduling between a mobile station and a base station, capable of selecting a QoS traffic class from a plurality of QoS traffic classes, the system comprising:

a flow capacity controller (FCC) for computing a requested uplink capacity for each data flow specified by a selected QoS traffic class in the mobile station;

a capacity request controller (CRC) for changing the requested uplink capacity so as to generate a changed capacity request indicating a changed capacity; [[and]]

means for transmitting the changed capacity request from the mobile station to the base station;

a capacity allocation controller (CAC) changing an allocated capacity transmitted from the base station based on an uplink transmission power; and
an FCC for updating an allowed capacity with the use of the changed allocated capacity.

15. (canceled).

16. (previously presented): The system as claimed in claim 14, wherein the mobile station further comprises:

a Transport Format Combination Controller (TFCC) for selecting a combination of transport formats according to the capacity allocation transmitted from the base station; and
an FCC for computing a capacity request for each of the flows with the use of the selected combination of transport formats.

17. (currently amended): The system as claimed in claim 14 [[or 15]], wherein the base station comprises:

reception means for receiving the changed capacity request; and
a capacity scheduler for computing an allowable capacity for each of the flows with the use of the changed capacity request, the selected traffic class, and the priority level transmitted from the mobile station.

18-19. (canceled).

20. (currently amended): A mobile station device for which an uplink capacity control is carried out by the base station, comprising:

a flow capacity controller (FCC) for computing a requested uplink capacity for each of data flows specified by a selected QoS traffic class in the mobile station,

a capacity request controller (CRC) for changing the requested uplink capacity so as to generate a changed capacity request indicating a changed capacity; [[and]]

means for transmitting the changed capacity request from the mobile station to the base station;

a capacity allocation controller (CAC) for changing an allocated capacity received from the base station based on an uplink transmission power; and

an FCC for updating an allowed capacity with the use of the changed allowed capacity.

21. (canceled).

22. (currently amended): A mobile station device as claimed in claim[[21]] 20, wherein the device further comprises a Transport Format Combination Controller (TFCC) for selecting a transport format combination based on the capacity allocation transmitted from the base station, and

an FCC for computing the capacity request for each of the flows by the use of the combination of the selected transport formats.

23. (canceled).